

Human Behavior and WMD Crisis /Risk Communication Workshop

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EXECUTIVE SUMMARY

Objectives

This report is a comprehensive analysis of the *Human Behavior and WMD Crisis/Risk Communication Workshop*, held on December 11-12, 2000. It describes the results of the workshop, and includes lessons learned from past experiences, addresses unresolved issues that were identified by combining the expertise of the participants, and it presents prioritized recommendations for future research, analysis, and other activities. This section of the report includes recommendations not only from the panel itself, but from a senior advisory board created specifically for this workshop.

History and Purpose

A disaster response program includes many factors that will determine its success in dealing with the effects of a WMD attack (which includes a Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) incident) and restoring public order. In the United States, several agencies at the federal, state, and local level have been put in place to handle contingencies such as natural disasters, chemical spills, and nuclear mishaps. The Federal Response Plan, a signed agreement among 27 Federal departments and agencies, including the American Red Cross, provides a mechanism for coordinating delivery of Federal assistance and resources to augment state and local efforts in major disasters or emergencies.

This plan, however, does not describe an integrated, comprehensive blueprint for crisis/risk communications in the event of a large-scale disaster such as a WMD attack.

The Defense Threat Reduction Agency's Advanced Systems and Concepts Office (ASCO) is tasked with looking at ways to improve the ability of the Department of Defense (DoD) to protect U.S. and Allied forces from the threat of WMD. The Human Behavior and WMD Crisis/Risk Communication Workshop represents ASCO's and U.S. Joint Forces Command's first steps to developing strategies that focus directly on the preparedness mission and on the task of integrating various agencies, responders, media, and DoD into a *consequence management team* prepared to respond to a WMD attack.

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The workshop was co-sponsored by the Defense Threat Reduction Agency (DTRA), the U.S. Joint Forces Command, and the Federal Bureau of Investigation (FBI). Subject matter experts from government public affairs offices, the media, state emergency management agencies, academia, and DoD gathered for two days—December 11-12, 2000, to address, in four panels, the following questions:

- In the event of an WMD attack, how can public panic/fear be lessened?
- How can the public be persuaded to take appropriate action and to avoid inappropriate actions?
- Who among responders and the public are at higher risk of adverse psychological effects and how can such effects be prevented or mitigated?
- What are the likely psychosocial impacts of WMD and how can they be prevented or mitigated?

The goal of the workshop was to combine the expertise of its members and walk away with an understanding of:

- The myriad of issues involved in WMD crisis/risk communications;
- Next steps to address the likely human effects of a WMD attack; and
- Ways to identify an integrated consequence management crisis/risk communication strategy for a WMD attack.

Panelists shared their experiences with past disasters, human behavior, media coverage, and psychosocial effects. The two-day workshop provided a look at how communications, media, and messages affect the public. It focused on the importance of integrating the communications from the many players involved to form a cohesive WMD crisis/risk communication strategy. The major conclusions and recommendations, and unresolved issues that require further examination are summarized below.

Major Conclusions and Recommendations

The major conclusions and recommendations from the panel are summarized below. They fall into three general categories:

- Research and Analysis
- Communications and Awareness Campaign Development

- Training and Preparation

Research and Analysis

Analyze Factors that Build Trust The level of trust by the public, especially in government, is low. To address this issue, planners will need to conduct further analysis and research to determine the factors that build trust. Findings can be shared with respective agencies and the results will improve the overall communication strategy.

Communication and Awareness Campaign

Build a Communications Network An effective consequence management plan will also require building a communication network before an event, including an emergency network infrastructure. The network could include points of contact from all relevant government agencies, military services, and local responders as well as key "validators" and credible sources (explained below).

Identify "Validators" and "Credible Sources" Validators are subject matter experts to whom the media can be referred during a WMD event. Credible sources are trusted communicators, who may or may not be validators. They can include national officials (such as the Surgeon General), noted representatives from the media, state health officials, and respected ministers and chaplains.

Focus on Basic Communication Strategies The panel recommended a basic approach to developing the crisis/risk communication plan, which involves carefully identifying each audience segment and stakeholder group, on the local, national, and international level. A database of stakeholders would be a useful tool.

Target Communications to the Public Effective communications must be targeted. The workshop members recommended desensitizing the public on WMD agents and what to expect by developing awareness campaigns and community training as soon as possible. Surveys and focus groups can help identify the public's values and concerns.

Work with the Media The government must engage the media in useful dialogue, at the local, national and international level. The workshop recommended establishing a news/media information flow that will focus on health/mental health and especially on

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acute anxiety responses during and after disasters. The workshop also recommended identifying designated mental health experts with experience in news media communications to deliver messages related to mental health. Media representatives should meet face-to-face with public affairs officials, scientists, and politicians, before a WMD occurs.

Develop Realistic Scenarios WMD events such as a bio-terrorism attack are unprecedented. The panel recommended developing best- and worst-case scenarios and communicating aspects of these, as appropriate to the public. Also important, is constantly informing the public—as far as security concerns allow—about what will be done to resolve the crisis.

Prepare for Misinformation and Varied Reactions Communicators should prepare for any type of public reaction, including sources of misinformation ("underminers"), urban legends, hoaxes, and so on.

Work with the Entertainment Industry The power of the entertainment industry in shaping public perception can be harnessed in favor of accurate depictions of WMD events and information. The CDC successfully uses Hollywood outreach to ensure accurate information about diseases and the way the CDC is represented on TV and in feature films. Other agencies should follow the CDC's lead.

Training and Preparation

Better Organize Pre-disaster and Consequence Management Planning Pre-disaster crisis/risk communication planning in a WMD attack must be better defined and organized. The workshop recommended that an agency be assigned to take the lead in developing WMD awareness and education campaigns.

Overall Preparation Overall preparation for a WMD attack must include research (before, during, and after a WMD attack); education and training; and accurate information dissemination to the public. The workshop recommended looking at the different WMD agents and the effects particular to each agent to develop specific plans for each. To deal with the uncertainty of WMD attacks, the panel recommends: establishing the parameters of the expected responses; and developing case studies that apply to particular types of WMD. Use of existing information is important; critical information that could be used for consequence management risk/communication planning already exists, waiting to be collected and analyzed.

Establish a Coordinated Emergency Response Plan The workshop recommended bringing the heads of all relevant agencies together to set up a coordinated emergency response plan for WMD attacks.

Implement Two-Way Communication Systems Mass media can facilitate information flow to the public, but effective communication must also be two-way and interactive. Hotlines and similar vehicles can be useful tools for interactive communications.

Train the Medical Community Preparation for a WMD attack requires trained responders. Training requires time and resources. It also requires ongoing support (even at a distance, using telemedicine and other means) and care for the families of medical personnel. Finally, it requires programs that address WMD effects on the responder community.

Major Unresolved Issues

Research and Analysis

Building Trust Trust is a critical issue to explore further, namely: how will government agencies build public trust such that, if an attack occurs, the public will believe the messages they receive and act accordingly? Answers to these questions will depend upon further analysis of human behavior and the factors that make a person trustworthy.

Addressing Sources of Misinformation Planners will also have to address sources of misinformation, disinformation, and propaganda attacks by individuals and groups who thrive on government conspiracy theories, urban legends, myths, and sensationalism.

Researching WMD Issues Scientists will be able to provide answers to questions about a WMD attack, but careful analysis will take time. The experts recommend looking at past disasters and gathering data through surveys and focus groups. Experts need more information about the psychosocial issues involved in a WMD attack. At what level will the research occur? Who will fund it? More importantly, how will this information be used? Is there an audience waiting to hear the findings and to act with written policies and resource allocation?

Responder Personnel How do medical personnel handle differential diagnosis? Symptoms of fatigue, headache, nausea, muscle and joint aches are also visible in radiology exposure, battle fatigue, and flu. How will medical professionals know the difference? Additional research in these areas can help.

Communication and Awareness

Need for Public Awareness and Education How can communicators create awareness about a subject no one wants to think about? What will make the public pay attention to the possibility of an attack and want to know what to do in case of an attack? Further study is required to answer these questions and the best ways to educate the public about WMD attacks and how to build trust in agencies and spokespersons.

Government as an Audience Education and awareness is also necessary at the upper levels of government; Congress and top officials must be made aware of the significance of communication planning for a WMD attack and the need to develop an integrated consequence management system. Will they be willing to listen?

Partnering with the Media A key factor in developing an effective public awareness campaign is a close partnership between media and government. Will the media be willing to work with the government? The media is more likely to show body bags and disaster sites than progress being made. How can agencies and responders work with the media to encourage more positive messages and visuals in a WMD attack? In general, the news cycle is extremely fast, almost real-time. Yet, getting accurate information about a WMD attack can take time; will the media be able to communicate accurate information to the public?

Risk Communications Risk communication is difficult, if impossible, to apply in a WMD situation, since the immense uncertainty of a WMD prevents a thorough risk analysis. Also missing is a credible communicator with WMD knowledge who can serve as the messenger in a WMD attack and prepare accurate, pre-crafted messages ready for dissemination.

Training and Preparation

How to Simulate Realistic Scenarios Realistic scenarios are important tools. How can agencies simulate a realistic WMD attack that would account for today's real-world consequences?

Identifying a Lead Agency and Assigning Responsibilities Currently, there is no single agency to take the lead in risk/crisis communications. In a large scale disaster, one agency or an alliance of agencies must be identified, in

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addition to the roles and responsibilities of the participants and various players must be integrated.

Further complicating the integration issue are the varying response requirements, based on the type of attack—chemical, biological, nuclear and so on. Will a single agency be designated to lead, no matter what kind of attack? Or should different lead agencies be assigned, depending upon the type of attack? Many similar issues remain to be resolved.

The Need for An Emergency Notification System An excellent emergency notification alert system is required, which can be broadcast over all media (TV, radio, Internet).

Legal Ramifications Finally, what are the legal ramifications related to WMD attacks? Issues include varying laws related to quarantine and evacuation, eminent domain, standards for radiation levels, and other issues. How will the response to an WMD attack work when it affects several states and involves several different agencies? Who will be the overlying governing agency that addresses legal ramifications?

PANEL I: HOW CAN PUBLIC PANIC/FEAR BE LESSENED?

Introduction

The facilitator of Panel I was Joseph G. Wojtecki, from the Covello Group. Panel members included the following:

- Dale R. Bowlus, Jr. (U.S. Army Center for Health Promotion & Preventive Medicine)
- Clete DiGiovanni, Jr., M.D. (National Naval Medical Center)
- Richard C. Hyde (Hill & Knowlton)
- Regina E. Lundgren (Consultant)
- Bonnie Piper (Environmental Protection Agency)
- Peter M. Sandman, Ph.D. (Rutgers University)

Panel Background

The objective of Panel I was to address the issue: "*How can public panic/fear be lessened?*" The goal was to identify various perspectives that would assist in better analyzing how fear and panic can be addressed in crisis/risk communication, specifically:

- Understanding public fear and panic in a crisis environment;
- How emergency responders deal with panic and fear during an event; and
- How public spokespersons for government or local agencies can mitigate public panic and fear.

The panel comprised various players who would likely be involved in a WMD attack and included academic experts with knowledge of crisis/risk communication events. The selected panelists were experienced in dealing with actual disasters and public fear, both from an analytic as well as a responder's perspective. Dr. Sandman, Mr. Wotjecki, and Ms. Lundgren provided extensive background in crisis/risk communication and experience working in actual crisis situations in a civilian communication environment.

Mr. Bowlus provided a science and military background. Dr. DiGiovanni provided a DoD perspective and psychiatric analysis of fear and human behavior. Ms. Piper represented the public affairs professional in the government agency who would be a likely player in a WMD attack.

The key issues discussed by the panel included the following:

- Trust
- Response
- Public concern/awareness

Key Issues

Trust

Panelists agreed that trust was an important factor in reducing public fear. In a WMD attack, fear can be eased if messages are delivered by trusted spokespersons (local fire chief, mayor, politician, and so on). The challenge lies in identifying these individuals. The trusted person may not be the one most likely to be assumed trustworthy. For example, the panel emphasized that soldiers were more likely to believe their family doctors than the military medical personnel assigned to their units.

Serious thought will need to be given to identifying the most trusted people to deliver messages in a WMD situation, both locally and nationally, based on the nature of their credibility:

- Authority (U.S. President)
- Expert (military leader; scientist)
- Trusted communicator (e.g. Walter Cronkite)

Establishing and maintaining trust will involve analyzing those factors that instill trust in the public. Special emphasis must be paid to government. In a WMD attack, people will have to rely on the government to tell them what to do and the government is not always perceived as a reliable source. Agencies must begin to build public trust in government and to identify trustworthy individuals who are media trained now, before a WMD attack occurs.

Response

The degree of public fear and panic in a WMD attack will largely depend, aside from the nature of the attack, on factors such as the following:

- Nature of the agency response;
- Timing of the communications;
- The information and messages provided; and

- The nature of the media coverage.

These factors are complicated by the uncertainty surrounding a WMD attack: unlike other disasters, there may be no definitive beginning and ending. In a bio-terrorism attack, for example, it may be hard for authorities to pinpoint its origin, how it spreads, or when it ends. This dilemma raises the question: 'What do you say when you don't know?' Several panel members suggested that it is better to overestimate than underestimate a crisis. Having to go back and say 'it's worse than we thought', weakens the credibility of the communicator with the public.

Communications planning should focus on instilling public confidence in the organizations handling the consequences of the attack. Messages should be brief but informative; the more frightened an audience is, the less information they are capable of absorbing. Information should be factual, neither opinions nor predictions; to be credible, spokespersons must understand the science behind the disaster. Response communications will also need to address the micro issues—*Will I be able to eat my cereal? Can I use my shampoo?* According to the panel, these "in-the-weeds" questions should be addressed; they resonate with audiences.

Politicians should be updated and kept within the communications loop. Politicians can be effective, credible communicators if they are a part of the communication process. Finally, crisis/risk communication training is very important before a crisis and it should extend to persons of authority.

Public Concern

The panel strongly emphasized the issue of public concern, specifically: how much exists? The current level of public awareness surrounding WMD agents is minimal; this could lead to a high level of fear and panic in the event of an attack. The panel identified three different audience levels, ranging from too concerned to too apathetic. According to the panel, the predominant state of the American public is denial. The major obstacle to education and awareness is apathy. No one wants to think about WMD and what could happen if the U.S. were attacked.

Studies indicate that the likely reaction to a WMD attack will be extreme panic as the public reacts to the unknown. To build trust and better prepare the public for a WMD attack, education and awareness campaigns should be implemented before an attack. If the public is aware of the threat of WMD attacks and knows what to expect, they may be less frightened and less likely to panic if an attack occurs.

Lessons Learned

Listen to the Public

The panel emphasized the importance of listening to the public and anticipating what they want to hear. The panel reviewed good and bad examples of WMD communications. The Three Mile Island incident was characterized by poor communication planning. Victims interviewed afterwards felt they had been told nothing and distrusted the authorities. Hurricane George in Puerto Rico, on the other hand, was an excellent crisis communication event with a constant flow of updated information and attention to the audience's main concern—in this case, tourism.

Use Informed and Trusted Spokespersons

The Gulf War was also characterized by highly effective communications. Generals Powell and Schwarzkopf were effective spokespersons and the public trusted what they had to say. TWA Flight 800 was an example of the media's tendency to emphasize sensationalism and rush to judgment. At one point, the disaster was the result of a terrorist act, then it became a domestic mistake, and finally it was proven to be a mechanical failure. A WMD attack will provide a similar opportunity for the media and if the situation is not handled correctly, panic and fear could prevail.

Unresolved Issues

The panelists identified a number of issues that will require further exploration by response community and top officials.

Need for a Lead Agency

Currently, there is no single agency to take the lead in the area of crisis/risk communication and to initiate the development of communication networks consisting of local and federal contacts. In a large scale disaster, one agency or an alliance of agencies must be identified, as should the roles and responsibilities of individuals in those agencies.

Of most concern when developing a strategic communications plan is integrating the efforts of the numerous agencies and players involved. At the local level, this includes city or county emergency response teams, local law officials, and local media. At the state level, similar agencies or responders are in place including state emergency management offices and state police. The federal government agencies and likely responders include FEMA, FBI, CDC, and DOJ to name a few. Finally, efforts include those of DoD.

Equally important is identifying DoD's role in the process. Even though DoD will not be the lead agency, it will be important to define its role precisely. This involves addressing the following:

- In a WMD attack, what will DoD's specific role be?
- How will DoD combine its personnel and resources with those of civilian and other government agencies?
- When will DoD personnel and resources become involved?
- What will the chain of command be? Who will be in charge?

In a WMD attack, DoD medical and mental health resources, crowd control and security capabilities will likely be needed. How will DoD medical personnel interface with civilian personnel? There are many players involved in a potential disaster communication response strategy so defining the rules of engagement and the team leads will facilitate a better plan and better define how the agencies will coordinate efforts.

Further complicating the integration issue are the varying response requirements, based on the type of attack—chemical, biological or nuclear. Will a single agency be designated to lead, no matter what kind of attack? Or should different lead agencies be assigned, depending upon the type of attack? Also, what are the criteria for selecting a lead agent? Should lead agents be determined by geography or by scale of attack?

Need for Public Education

Educating the public on WMD should start now; it is a key ingredient in an effective communication response plan. This means having the correct information at hand and anticipating the questions the public will ask, despite the inherent uncertainty of a WMD attack. Further study is required about ways to educate the public on WMD and begin building trust in agencies and spokespersons.

How can communicators create awareness about a subject no one wants to think about? What will make the public pay attention to the possibility of an attack and want to know what to do in case of an attack? The media and the Internet can be used for education and awareness , but there is no way to control what the media will cover nor may they be willing to provide precious airtime to an event perceived as unlikely to happen. The Internet is a special challenge because it can be a conduit for massive amounts of misinformation. How can communicators help the public identify correct, useful information?

A key factor in developing an effective public awareness campaign is a close partnership between media and government. Will the media be willing to work with the government?

Education and awareness also apply to the upper levels of government; Congress and top officials must be made aware of the significance of communication planning for a WMD attack and the need to develop an integrated consequence management system. Will they be willing to listen?

Building Trust

Trust is a critical issue to explore further, namely: how will government agencies build public trust such that, if an attack occurs, the public will believe the messages they receive and act accordingly? Trust is important to address in planning because the public has limited trust in government and private corporations. At this time, there is no single, credible representative who is recognized as an expert on WMD who could speak to the public in the event of an attack.

The answer to the question—how does the government build public trust—depends upon further analysis of human behavior and the factors that make a person trustworthy. On a practical level, it also depends on identifying those individuals at the local, state, and national level who are trustworthy today. Setting up a network of trusted individuals to deliver messages in case of a WMD attack will require considerable research and maintenance to keep the names updated.

Planners will also have to address sources of misinformation, disinformation, and propaganda attacks by individuals and groups who thrive on government conspiracy theories, urban legends, myths, and sensationalism. Given the openness of our society and the ability to rapidly disseminate information via the Internet, the communication plan will have to consider information "pirates" who would like the public to believe that epidemics

like the West Nile Virus are government experiments gone out of control.

Panel Conclusions and Recommendations

Analyze Factors that Build Trust

To address the issue of trust, planners will need to conduct further analysis to determine the factors that build trust. Also needed are reliable sources of information for crisis/risk communication. Findings of this research could be shared with respective agencies to develop a more comprehensive communication strategy.

Better Organize Pre-disaster and Consequence Management Planning

Pre-disaster crisis/risk communication planning in a WMD attack must be better defined and organized. The panel recommended that an agency be assigned to develop WMD awareness and education campaigns. It suggested enlisting the support of the entertainment industry, where feasible, to accurately dramatize the elements of WMD to engage people and broaden awareness.

Build a Communications Network

An effective consequence management plan will also require building a communication network before the attack. The network could include points of contact from government agencies, military services, CDC, EPA, and local responders. Communication drills involving all agencies in the network would smooth planning and preparation for a contingency. In addition, an emergency network infrastructure to deal with WMD attacks should be developed.

Develop Scenarios

The panel recommended the development of best- and worst-case scenarios and communicate these to the public, along with the associated assumptions. This development would include preparing a list of questions and answers for each type of WMD attack. Also important, is constantly informing the public—as far as security concerns allow—about what is being done to resolve the crisis.

Identify Stakeholder Groups

Also important in crafting effective messages is identifying the various stakeholder groups. A database identifying stakeholders and their different perspectives based on age groups, marital status, and career progression should be developed. The panel cited an example of an Anthrax brochure designed for all military personnel which eventually was customized in three variations, each designed to address the concerns of a specific soldier category: married with kids, retirees, and career personnel.

Implement a Hotline

During the actual crisis, a hotline will be critical in monitoring calls and gaining a better understanding of what the public's concerns are. The hotline will assist planners in developing effective messages. The panel noted the success of the EPA hotline system in identifying key issues of concern to the public.

PANEL II: HOW CAN THE PUBLIC BE PERSUADED TO TAKE APPROPRIATE ACTION AND TO AVOID INAPPROPRIATE ACTIONS?

Introduction

The facilitator of Panel II was Jerome M. Hauer from Kroll Associates. Panel II members included the following:

- RADM Craig Quigley (Deputy Assistant Secretary of Defense for Public Affairs)
- Barbara Reynolds (Centers for Disease Control and Prevention)
- Tim Tinker, Ph.D. (Matthews Media Group)
- Robert J. Ursano, M.D. (Uniformed Services University of Health Sciences)
- Marc Wolfson (Federal Emergency Management Agency)

Panel Background

The objective of Panel II was to address the issue: "*How can the public be persuaded to take appropriate action and to avoid inappropriate actions?*" In this panel, the combination of media professionals, public affairs professionals, emergency management planners, and medical experts were assembled to address human behavior and the art of persuasion in a WMD attack.

Mr. Hauer and Dr. Tinker provided extensive experience working in emergency management and developing strategic response plans. Ms. Reynolds and Mr. Wolfson provided the public affairs perspectives of two agencies likely to be involved in bioterrorism attacks—FEMA and CDC. RADM Quigley was a representative for both the media and DoD public affairs and Dr. Ursano was the medical professional able to provide psychiatric analysis of audience behavior in a crisis.

Persuading the public to act appropriately has been a challenge for government officials for years. In a WMD attack, several factors exist that will work against the goal of achieving appropriate public reaction. To persuade the public this panel looked at various issues that affect public behavior.

Key Issues

The key issues discussed by the panel included the following:

- Preparation
- Message Approach
- Media Coverage
- Audience Behavior

Preparation

Convincing the public to take appropriate action in a WMD attack will require considerable planning. It will require developing a significant level of situational awareness of every aspect of a WMD attack. Situational awareness incorporates knowledge of plans, procedures, and processes for handling all aspects of a WMD, no matter what type.

Concentrate on Local Communities

One way to practically address the problem is to concentrate on local communities and prepare each community on a smaller scale for a WMD attack. For example, CDC maintains an excellent two-way communication program with local communities that includes regional workshops with public health officials and medical professionals, a website, and satellite training that offers CME credits.

Set up Communications Infrastructure

Planning will also require agencies to set up a communication infrastructure to report emergency information. The public must know what to do and what to be aware of in a WMD attack. FEMA has set up a communication network for reporting during national emergencies, but other organizations such as public health agencies do not have one in place and must address how they will get the information out to the public. All the right representatives should be involved and have defined roles—communicators, media, mental health professionals, and spokespeople. This will include identifying those who will have to notify the victims' families.

Message Approach

Communication under a WMD attack is about persuasion and changing behavior, specifically:

- Convincing the public to do something (evacuate when they don't wish to leave);
- Appealing to them to stop what they are doing (looting, bribing); or
- Convincing them to do nothing (shelter in place).

Message development also requires very careful planning to determine the effects of messages on industries and private groups. One statement from CDC can wipe out an entire industry and put many people out of work. Including a variety of relevant professionals early in the planning process is also important. For example, the West Nile virus could have been identified much earlier if veterinarians were brought in initially. Veterinarians discovered that birds were dying from some exotic disease, which was identified as West Nile. Subsequent testing on humans confirmed that victims who were originally assumed to be suffering from St. Louis encephalitis were actually suffering from West Nile disease.

Media Coverage

Building effective media relationships now will help avoid inappropriate public actions in the event of a WMD attack. The interests of the media establishment and those of the public—as exercised by government—are not always the same. It may make sensational news to skew the events of a WMD attack while the public would be best served by accurate information designed to calm the public and avoid inappropriate behavior. In addition, the news cycle has grown very short, nearly real-time. This pressure to "get the news out" may also conflict with the time required to analyze a WMD event and to disseminate accurate information.

The planning agencies will need to partner with and educate the media on the importance of accurate coverage of a WMD event. Typically, the communication planners will be dealing with young reporters trying to make a name for themselves. Getting these people to understand the importance of public reaction and the need for appropriate public response will be a high priority in the communication plan.

At the same time, when the media requests interviews from members of the scientific/medical community, these professionals may not be accustomed to being on camera or dealing with the press. Exacerbating the situation is the media's need for

instant, real-time information versus the scientific/medical community's need for careful evaluation before making responses.

The communication plan must provide for immediate response to media inquiries. If the best source of information is neither known to the press or unavailable, the press will go to another source if that source is perceived credible, whether or not that source is the most knowledgeable. Such sources can provide incorrect information or information that is out of context, feeding the public's ignorance or its desire to act inappropriately.

Audience Behavior

When developing a persuasive communication strategy, agencies should consider the following:

- Who they are talking to (media, government, public);
- What they want to say;
- How they want to say it; and
- The current level of knowledge of the audience.

Different audiences require different messages (e.g., the elderly, the homebound, children, different cultures, and so on). Effective communication strategies will need to address these varying audiences and how to best reach them.

Communications planning should also consider audiences who over-react, who take precaution to an extreme. This group will present a special challenge in a WMD attack by demanding care they don't necessarily require.

An integrated communications plan will combine the communication plans already developed by various agencies. Responders at the local, state, and national level already have response plans for similar incidents in place. HAZMAT response plans could form the basis for a response plan to a chemical attack. The integration effort will involve uncovering existing plans and using them as a foundation upon which to build.

Lessons Learned

The Importance of Agency Coordination

Agency coordination will be very important in a WMD attack. The various agencies in the TWA Flight 800 crash released conflicting messages, reducing public trust. At one point, an agency in Washington released a statement that bodies had been found in the fuselage which later turned out to be untrue. In another case, different agencies released different information on the proper cooking of a hamburger, which confused the public during the ecoli breakout.

A cohesive message is critical. A successful example was the communication efforts in New York City during the West Nile Virus outbreak. The FBI was kept informed by the city and both responders had excellent communication.

The Media's Role

Rather than serving as a responsible conduit for accurate information, the media can exacerbate the problem. For example, it tends to blow an event out of proportion if given the opportunity. Richard Preston, a journalist, wrote the *Cobra Event*, which suggested that the West Nile Virus was a terrorist event. This book fed public doubts that the government was handling the situation appropriately.

The media will also send whoever is available to cover an event, not necessarily the reporter with the most expertise in the matter at hand. During the Gulf War, the media sent many reporters to the area, but few with any training in military affairs. The media coverage resulting from reporters who lack expertise in their area can lead to inaccurate and sometimes damaging publicity.

The trust issue is especially important when ensuring that the public takes appropriate action. In the 1995 Oklahoma City bombing, the spokesperson was the local Fire Chief. This worked well because the community knew him and trusted him. Communications should focus on trust and honesty.

A less successful example was a recent severe ice storm in the Washington D.C. area. Pepco could have communicated what they were doing to restore power and how difficult the challenge was. Instead, their spokesperson identified the time Pepco expected to have power restored and as each new deadline was missed, the public became more furious. Situations like these can lead to inappropriate actions taken by the public.

Expediency will have an effect on the public's reaction. In the case of eruption at Mount St. Helen's, scientists were willing to conduct an analysis on the ash to determine if it was poisonous and come back to the press in a few days. These days,

the news cycle is so rapid that the press won't wait three days for a scientific analysis.

The effect of messages can be broad-ranging and unpredictable. For example, CDC's messages concerning Hepatitis A in school lunches insulted the leaders of Mexico where the strawberries were allegedly grown. The Department of Justice had to be brought in to deal with the situation.

Unresolved Issues

Communication Issues/Role

WMD communications offer much uncertainty. How will communicators, for example, convince people to honor quarantines or evacuations? DoD and other military personnel have supported these activities in past crisis events but there is no set policy that defines what role DoD will play in a WMD attack. DoD will not be the lead agency, so how will they interact with that lead agency and who will give them orders?

How to Simulate Realistic Scenarios?

Case studies of health risk communication concerning epidemics such as influenza in the 1920s and the smallpox vaccinations in the 1950s help agencies understand human behavior but the variables are much different in today's "CNN age." How can agencies simulate a realistic WMD attack that would account for today's real-world consequences?

The Need for An Emergency Notification System

An excellent emergency notification alert system should be broadcast over the Internet as well as through traditional media, such as radio and TV. FEMA is working with the Department of Commerce on an emergency alert system that would work through ISPs to broadcast emergency messages online. Security precautions for this process, none of which exist at this time, should be addressed.

Dealing with "Doomsayers"

Another unresolved issue is dealing with active "doomsayers." There will always be spokespeople who encourage distrust of government and willingly rally the public to take inappropriate

actions. How will the agencies and communication planners deal with those who seek to purposely undermine government communications?

Panel Conclusions and Recommendations

Focus on Basic Communication Strategies

The panel recommended going "back to basics" when developing communication strategies; this involves answering questions such as:

- Who is the audience: media, government, the public?
- At what level are we communicating: local, national, or international?
- What do we want to say to each audience segment?
- Who are the primary communicators?
- How do we want to fashion the messages?
- What is each audience's current level of knowledge about WMD-related topics?

Identify "Validators"

To assist in communicating with the media, the panel recommended setting up a list of validators. These are subject matter experts to whom the media can be referred during a WMD event.

Identify Credible Sources

To encourage the public to take appropriate action, messengers should be credible sources, and these should be identified beforehand. Credible sources include national officials (such as the Surgeon General), state health officials, and respected ministers and chaplains.

Work with the Entertainment Industry

The entertainment industry is a powerful source for public perception of reality. Its power can be harnessed in favor of accurate depictions of WMD events and information. CDC successfully uses Hollywood outreach to ensure accurate

information about diseases and the way CDC is represented on TV and in feature films. Other agencies should follow CDC's lead.

Use Existing Information

Critical information that could be used for consequence management risk/communication planning already exists, waiting to be collected and analyzed. Incidents such as the Mad Cow Disease and the E coli Virus offer useful knowledge. In terms of exercises, a bioterrorism strategy is already in place in HAZMAT plans, for example.

Plan for Two-Way Communication

Two-way communications, such as hotlines, will be important avenues for public access to accurate information. The Joint Information Center (JIC) must provide media monitoring, rumor control, and rapid response. In addition, there should be a team assigned to immediately address misinformation.

One way to deal with information needs of a large population of stakeholders is to divide them among the various agencies. CDC already maintains a list of medical and public health stakeholders. Communication planners will need to work with other agencies to identify stakeholder groups and those assigned to best communicate with those groups.

Prepare for Misinformation and Varied Reactions

It will be important to prepare for any type of public reaction, including sources of misinformation ("underminers"), urban legends, hoaxes and so on. For example, studies of past disasters prove that the public will have reactions even if they are not infected. These are the "worried well." Physician training and a focus on the outpatient environment can deal with the "worried well" population and those with Multiple Unexplained Physical Symptoms (MUPS).

PANEL III: WHO AMONG RESPONDERS AND THE PUBLIC ARE AT HIGHER RISK OF ADVERSE PSYCHOLOGICAL EFFECTS AND HOW CAN SUCH EFFECTS BE PREVENTED OR MITIGATED?

Introduction

The facilitator of Panel III was Colonel Ann E. Norwood, M.D. (Uniformed Services University of Health Sciences). Panel III members included the following:

- Elizabeth K. Carll, Ph.D. (Clinical Psychologist)
- Robert DeMartino, M.D. (Center for Mental Health Services, Substance Abuse and Mental Health Services Administration)
- Carol S. North, M.D. (Washington University School of Medicine)
- Betty Pfefferbaum, M.D. (University of Oklahoma Health Services)

Panel Background

The objective of Panel III was to address the issue: "*Who among responders and the public are at higher risk of adverse psychological effects and how can such effects be prevented or mitigated?*" The panel sought to identify the known effects of disaster on first responders and the public by relying on past disaster studies in the United States and lessons learned from the field. The panel then sought to determine the best methods for mitigating or preventing these effects. The subject matter experts provided insight into which groups would be affected most by adverse psychological effects and how these effects could be dealt with efficiently based on past disasters and victim interviews.

The four panel members were selected as experts in this subject matter primarily for their research in the area and relevant real world experience. A facilitator, COL Norwood brought a background prolific in researching the psychiatric dimensions of disaster. Dr's North and Pfefferbaum provided their empirical data in post-disaster research, particularly with the victims of the Oklahoma City Bombing. Dr. DeMartino brought his observations from the Federal Government's point of view and Dr. Carll, who is a private psychologist provided her real-world

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experience, gained from counseling victims of disaster. This balance of expertise combined top mental and medical health analysts with hands-on disaster responder management. The panel looked at several different factors that cause adverse psychological effects in disaster victims such as:

- Media coverage;
- Previous psychological conditions of victims;
- Media exposure of the victims; and
- Messages.

The panel covered various categories of responders and the public. Discussed were case studies of past disasters and resulting psychological effects and possible contingencies that need to be addressed in planning mitigation such as evacuation and mental health access were discussed.

Key Issues

The key issues discussed by the panel included the following:

- Effective Response/Preparation
- Symptoms
- Media
- Risk Profiles
- Psychological effects prevention/mitigation

Effective Response/Preparation

Effective response means disseminating large amounts of information to the public very quickly. As soon as possible, communicators must get accurate information to the public, to encourage the public to return to normalcy as soon as possible.

The medical community must be a central focus of training efforts for WMD because they are likely to be the first responders. In addition, Disaster Response Networks must include mental health as a part of planning. A clinically trained psychologist should be part of the response team.

Symptoms

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The panel identified many types of symptoms resulting from WMD attacks. For example:

- Cold and flu symptoms;
- Changes in the behavior of children as a result of disaster exposure (introverts becoming extraverts, increased dependency, decreased maturity); and
- Increased alcohol intake by rescue and fire workers to cope with the effects of disasters.

Media

The media determines how much time responders have on-air and, to some extent, dictate the subject matter. Media coverage of an event directly affects audience response; focusing on the negative or grotesque aspects of a disaster can cause public harm.

Even in today's "CNN" age, not everyone watches television or can be communicated to through TV. Print communications have a deeper impact because they are permanent. The message does not go away and more often than not, the receiver seeks the message in print.

Websites are an effective communications channel for targeted messages, including two-way communications. FEMA, for example, targets different audiences including kids, parents, and teachers.

Risk Profiles

First Responders

The panel recognized that those at highest risk of adverse psychological effects in a disaster include the medical community, fire and rescue workers, leaders and decision-makers, women, and children. The order of who is affected first in this community changes with the agent.

For example, in a chemical incident, fire fighters are usually the first on the scene; however, in a bioterrorist event, the most likely first responders are hospital/medical personnel. As the workshop participants indicated, the release of a biological agent has no centralized locus of destruction. If the agent is detonated without the knowledge of officials or the media, the singularity of the event is compromised.

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Instead, the event will evolve as more information is uncovered, and authorities have confirmed that information. Most likely, the hospital personnel may be the first to conclude that a biological agent has been released, based on many people coming to the hospital, complaining of symptoms. In Goiana, Brazil, a small number of citizens became sick and even died after handling some radioactive waste. What began as an isolated event escalated into organized fear once the media covered it and the hospitals were crammed with people.

Seventy percent of hospital personnel are women with family responsibilities, and twice as likely than men to experience post-traumatic stress disorders, anxiety, and depressive disorders. Dealing with their own families as well as the families of victims places added pressure on personnel routines; it also places them in the "line of fire" for ensuing anger. In addition, rescue and fire personnel are not only at high risk but also prone to denial when it comes to admitting they need help.

Public Officials

Leaders and decision-makers are high-profile professionals and perform under constant pressure. This group is likely to suffer burnout from lack of rest.

The Public

Among the general population, women experience twice the rates of anxiety and depressive disorders as men, and following disasters, women had nearly twice the rates of post-traumatic stress disorder (PTSD) as men. Studies also show, however, that males are more prone to denial when it comes to admitting they need help, and responders more prone to denial than the general public.

Since much data is self-reported, a caveat should be used when analyzing the general population and its response to disaster. Studies also found that rescue workers and fire fighters have a preexisting propensity for alcoholism and alcohol intake increases under extreme stress conditions.

Adult reactions to stress are often manifested in different ways. For example, the immune system is compromised contributing to health complications, increased alcohol and cigarette use, inattention to family responsibilities, depression and anxiety, all of which can often go untreated in light of triage prioritization.

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Many studies were conducted on children affected by the Oklahoma City bombing, primarily because so many victims were children. Those children who were exposed to the bombing both directly and indirectly, whether through first experience, proximity, or knowing a victim, were at a higher risk for PTSD and other behavioral problems than were adult population groups.

Existing characteristics of the child, such as personality psychological well-being as well as the supporting network of family and social or community also determine the child's response to a disaster and the healing time involved. For example, children with strong family and community support respond better and heal quicker than those children without.

Effects of Media Exposure

The media influences children differently than it does adults; these distinctions warrant consideration when planning fear mitigation strategies. For children, the effects of television coverage of disasters, while comprehensive, are less sustaining than are the print media.

During the Oklahoma City bombing, 24-hour-a-day bomb coverage had two distinct effects on children. On one hand, the constant coverage created the illusion that the entire town had been demolished. On the other hand, the constant barrage of images blurred the children's perception of reality. The deepest media impact for children was print communications, newspapers, magazines, because it demonstrated the permanence, the realness of the event compared to non-stop media images broadcast over the TV.

The effect of television exposure on adults was more complex. In the Persian Gulf War, those personally affected by an event were naturally more drawn to television coverage than those who were not. Among the spouses of deployed soldiers, TV provided a solid sense of place, a context that relieved anxiety. For the spouses of the soldiers waiting for deployment, TV created more anxiety and emphasized the unknown.

Most studies show, however, that more information leads to decreased anxiety. For example, the TWA 800 disaster created tremendous hostility from the affected families toward officials in the first few days, due to the perception that information was being withheld. If affected families had been singled out for personal debriefing by officials, the panel maintained, much anger could have been alleviated.

Often, the subjective assessment or appraisal of danger or life threat may be even more important than actual physical measures

of exposure. Some studies report that initial responses to a traumatic incident be themselves considered another aspect of exposure. These are important considerations for making mitigation strategies.

Behavioral Casualties

One other at-risk public group the panel discussed were *behavioral casualties*. These casualties result directly from actions taken by individuals. This might include, for example, those who don't wear their gas mask correctly or those who are injured because they ran from a disaster area. Such fear-controlled behavior can lead to panic, rendering the best-laid mitigation plans futile.

Long-term fear and anxiety in a community exist for years after an event and may even have an intergenerational effect. For example, after the incident at Three-Mile Island, long-term health effects were negligible; anxiety symptoms, levels of distrust, and stress, however, continue to persist today, more than twenty years after the event.

Psychological Effects Prevention/Mitigation

First Responders

The first responder community must be cared for before, during, and after an event, because often, it is this community that will be heavily relied upon for providing victim care. Adequate preparation, field exercises, increased protection, known sources of vaccines and antibiotics, as well as known sources for obtaining information will help lessen the uncertainty of an event, create a community of trust, and help balance the burden on decision makers.

More importantly, however, is the expectation among first responders that there will, in fact, be psychological consequences. First responders must be made aware of the psychological consequences of disaster so they can pay more attention to stress indicators. Reducing fear, anxiety, mass exodus, and creating a cohesive first responder unit whose members can adequately cope with a disaster will depend upon:

- Defined rescue limitations;
- Prescribed communication channels on how and where to get help; and

- An atmosphere that reduces the stigmatization of those who admit stress-related problems.

Training must include the first responder's family. Training family members and providing them with communication, relocation, resource allocation, such as vaccines or antibiotics, and priority care will help the first responder focus on treating the public and alleviate worries about their families.

The panel also indicated that, while every hospital should know how to respond to an event, not every hospital will know how to treat an event. A network of hospitals, experts, specializations, and supplies should be set up to create a cohesive national medical unit, prevent isolation, and to share precious information.

The panel also noted that new technology can benefit the preparation of hospitals and personnel, for example, telemedicine has tremendous potential for training medical personnel, research exchange, advice, and guidance.

The Public

Studies show that the amount of media coverage of a traumatic event directly affects audience response. In other words, the information you receive can hurt you. The cold and flu symptoms in those directly affected by the Persian Gulf War lasted through the duration of the war, primarily through constant day-to-day viewing of CNN coverage.

In crisis reporting, the media focuses only on the problematic, often exacerbating the effect on the public. Often known as 'body bag journalism', typical media coverage of an event covers the negative or grotesque aspects such as: what happened, how many people died, who is involved, and what actions were being taken to determine responsibility for the act.

Working with the Media

Using the media as an effective education tool before, during, and after a crisis is no easy task. An integrated media campaign must be created now to educate and inform the public on the risks while avoiding the scare tactics which studies show do not work. A cadre of media/medical/government officials must be formed to disseminate key information rapidly to the public in a very effective manner. This involves shaping the right messages and using the right persons to communicate with the public.

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Procedures for communicating with the major news media should be established and constantly updated. In addition, agencies should include, with their general information, information about health and mental health, especially focussing on expected acute anxiety responses to help.

Media Education

Parents need to understand the manipulative effects of constant disaster portrayal. Education campaigns about disasters and the importance of open lines of discussion are important, as is increasing pressure on the media to focus less on the disaster and more on the healing.

The panel members even hinted that increased suicides and school shootings were "copy-cat" behaviors, often partially in response to excessive media focus on disasters. Since the media is critical to reaching any large group, however, the panel stressed the need for the media to focus on disaster intervention and the outcome, not only the problem.

Public Perception of Government

The public's perception of government is heightened during a crisis. A lack of continuity, control, adequate resources, or full knowledge of the event can invoke fear and panic, and threaten social unity. Ensuring that government policy relating to terrorism and terrorists is unambiguous will prepare the public for the unknown; it will provide a greater sense of control.

This is due to the public's perceived lack of self-control in a situation. The public must feel empowered to take action in the event of a crises to reduce the likelihood of victimization and ensuing panic. That control could be as benign as the duck-and-cover procedure during the Cold War; a comprehensive disaster preparedness/response plan, however, can provide expectation control. That is, physical and mental preparation will relieve anxiety despite the expectation of potential injury and death. It provides the public with a feeling that they can take steps to help a situation and do not have to sit idly by, or panic en masse.

Providing Disaster Education/Training

Well-timed disaster education and training to the public is critical. Studies indicate that effective risk avoidance measures occur when perceived relevance is high. FEMA's Project

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Impact on disaster mitigation has found that a community is most responsive to risk avoidance and mitigation education usually directly after a disaster has occurred because they have been sensitized.

When the Zenia, Ohio tornado hit, FEMA brought the program into their community immediately after their disaster. Future prevention during crises is most critical and the public is more accepting of such efforts if they have been affected.

Studies must be done to determine the efficacy and impact of WMD vaccination campaigns. This could potentially become its own disaster. Using the Anthrax vaccine as an historical example, the panel discussed how the U.S. Military mismanaged its efforts to dispense the vaccine among its potentially impacted population and, instead, created fundamental problems of mistrust, from which they may never recover.

Working with Scenarios

The panel then presented a scenario of scarce resources. What if there is insufficient medical care, beds, or medication for the crises? How do you allocate, and how do you communicate that decision? Stockpiling of antibiotics cannot be done because it is deemed impossible to prepare for the worst case scenario. Yet it is important to prepare for the worst-case scenario. A useful way to prepare would be to focus on a scenario that is reasonable enough to prepare for, but which will also require making typical decisions about who gets what and when it happens.

Allocating antibiotics and resources to selected groups of people and not all who might request it can have serious ramifications. Scenario leaders must explain those decisions, why they are necessary and what will happen in an actual event. It may be unpopular to acknowledge resource allocation issues, but it may be unavoidable to do so.

Lessons Learned

The Role of the Media

In Goiana, Brazil, villagers found discarded radioactive powder that glowed and applied it to their skin. People died but it did not become a crisis until the media broadcast the story and

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it became a full-scale panic creating a demand for medical care by people not even exposed or near the vicinity of Goiana

The media only showed the disaster areas of the earthquakes in San Francisco without giving a perspective of the undamaged area thus feeding the perception that all of San Francisco was wiped out

Psychological Effects

Effects on both victims and responders can be severe and long-term. In the Jonesboro shooting, for example, a young man was experiencing flashbacks ten years later. Dr. Carol North's analysis indicated that the longer number of hours spent at the disaster site are directly correlated with the intensity of PTSD symptoms.

The Air Force successfully implemented a program to reduce suicide by encouraging airmen to seek help without retribution. According to Dr. Robert DeMartino, this decreased suicides by 50%. A similar plan could be implemented for rescue and fire workers. Support groups were created on Long Island, New York to assist Persian Gulf family members deal with stress and these proved effective.

Fear and Avoidance

The AIDS epidemic provides a real-world example of a devastating disease that spread throughout the community, with no public knowledge, no medical knowledge, and no government acknowledgement. When patients first were identified as having AIDS, the medical community, by and large, fled with few exceptions. A few hospitals in a few cities began to take care of the affected population, but the majority medical response in many communities, even in major medical centers, was fear and avoidance. Professionals' medical or RN degrees did not immunize them from fear, and they wanted nothing to do with these patients. The effect of AIDS on the medical profession would be a useful case study.

Unresolved Issues

WMD Attacks Create Communication Challenges

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There are various types of WMD attacks, each presenting different communication challenges. A bombing, for example, can originate from a single location and have a clearly defined beginning and ending. In contrast, a bioterrorism attack can spread to many locations and it may be difficult to pinpoint where it starts, how it spreads, and so on. This type of attack raises different communication challenges. The absence of a definitive start and end point fundamentally alters the potential for fear and panic. An adequate response for the former may prove inadequate for the latter. How do we adjust crisis/risk communication to address these various scenarios?

Positive Media Coverage

The media is more likely to show body bags and disaster sites than progress being made. How can agencies and responders work with the media to encourage more positive messages and visuals in a WMD attack?

Resistance to Preventative Measures

Anthrax vaccinations raise a disturbing issue: why didn't everyone who had the opportunity to protect himself or herself get vaccinated? Why has this program been met with such resistance and how does this case study reflect on future preventative actions concerning WMD?

Raising Awareness

One of the best fear-reducing actions in crisis/risk communication is education and awareness. The public appears not to be alarmed by WMD attacks nor do they necessarily take them seriously. How can the authorities encourage the public to take WMD attacks seriously? How can the media, in turn, be encouraged to pay attention to this issue, in terms of preparation, even when a real WMD is not happening?

Panel Conclusions and Recommendations

Implement Programs to Address WMD Effects

As mentioned above, the Air Force successfully implemented a program to reduce suicide by encouraging airmen to seek mental health consultation without retribution. A similar plan could be

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implemented for rescue and fire workers. The USS Cole incident presents an excellent case study of how the attack affected crew members and those sailors who have deployed since the attack.

Work with the Media

The panel recommended establishing a news/media information flow that will focus on health/mental health and especially acute anxiety responses during and after disasters. The panel also recommended identifying designated mental health experts with experience in news media communications to deliver messages related to mental health. The government must engage the media in a dialogue.

Train the Medical Community

Preparation for a WMD attack also requires the right medical personnel, mental health experts, and security personnel who are trained and ready. This requires time and resources. Proper training will encourage the medical community not to evacuate in a WMD attack and to sustain their responsibilities. Training also includes ongoing support (even at a distance, using telemedicine and other means) and care for the families of medical personnel.

Medical professionals and responders must be trained to deal with blame and the scapegoat syndrome. If they know to expect it, they are better prepared to deal with it.

Establish a Coordinated Emergency Response Plan for Communications and Outreach

The panel recommended bringing together the heads of FEMA, HHS, DOJ, and DoD to set up a coordinated emergency response plan for communications and outreach in the event of an WMD attack. The plan would include ways to maintain government response continuity, and how to manage Fear Organized Behavior (FOB).

Target Communications to the Public

The panel discussed ways to effectively target communications to the public. For example, FEMA has a web link specifically for kids and recommends that more agencies adopt a communication plan that targets education to children and other audience demographics. Websites should encourage readers to print emergency material like "what to do in an emergency" since a WMD attack might result in power outages.

PANEL IV: WHAT ARE THE LIKELY PSYCHOSOCIAL IMPACTS OF WMD AND HOW CAN THEY BE PREVENTED OR MITIGATED?

Introduction

The facilitator of Panel IV was Dickson S. Diamond, M.D., from the FBI. Panel IV members included the following:

- Steven M. Becker, Ph.D. (Center for Disaster Preparedness, The University of Alabama at Birmingham)
- Rosemarie M. Bowler, Ph.D. (San Francisco State University)
- James H. Flynn, Ph.D. (Decision Research)
- Barbara Martinez (FBI/Chief, WMD Operations Unit)
- LTC Ross H. Pastel, Ph.D. (Armed Forces Radiobiology Research Institute)
- COL James W. Stokes, M.D. (Department of Clinical Support Services, Academy of Health Sciences)
- Kathryn M. Turman (Office for Victims of Crime, Department of Justice)

Panel Background

The objective of Panel IV was to address the issue: "*What are the likely psychosocial impacts of WMD and how can they be prevented or mitigated.*" In this panel, subject matter experts were chosen from mental health and medical backgrounds, agency response backgrounds, DoD backgrounds, and academia. The combination of response expertise, government agency response experience, and human behavior analysis in both a civilian and military environment helped the panel to identify various psychosocial impacts of WMD and recommendations for mitigation.

Dr. Diamond and Ms. Martinez brought FBI perspectives in both psychosocial and response planning perspectives. Dr. Becker, Dr. Bowler, and Dr. Flynn provided observations on psychosocial impacts based on studies of actual events in the civilian and DoD environment. Dr. Pastel and Dr. Stokes added a more intense look into military resources and response planning and the integration of military and civilian resources. Ms. Turman shared experience with victims of terrorism and disaster and

provided insights into short- and long-term repercussions that will have to be a part of planning for WMD attacks.

This panel raised some serious issues regarding the integration of different agencies when they respond to a disaster and the best ways to communicate under an attack. Training and education dominated the discussions and panel members addressed the challenge of creating realistic exercises to prepare for a WMD attack. Current exercises and drills do not fully simulate the repercussions of a real WMD attack. The panel also identified some next steps to reduce long- and short-term psychosocial impacts of WMD attacks.

Key Issues

The key issues discussed by the panel included the following:

- Psychosocial Impacts/Stigma
- Response
- Social Issues
- Training/Education

Psychosocial Impacts/Stigma

Much gray area surrounds the impact of disasters on sociological behavior but studies show that victims can experience symptoms of PTSD as late as twelve years after the event. Resources allocated to the study of sociological impacts on victims is minimal at this time and prevents mental health professionals from developing clearer baselines for analysis.

The medical community will be greatly impacted by a WMD attack and must be prepared. To reduce the impact of WMD attacks, Disaster Response Networks must begin including mental health as a necessary part of planning. A clinically trained psychologist should be a part of the response team.

Response

Effective response means disseminating large amounts of information to the public very quickly. Victims need information; accurate information empowers people to take appropriate action. Response plans should encourage the public to return to normalcy as soon as possible after an attack. Death notification to family members is an important issue because it impacts how they feel about the system. There is discrepancy on who delivers the bad news in WMD events.

Our response plans are short term. We need to look at plans that address symptoms 10-20 years out and address long term effects, possibly including multi-generational effects.

There are many DoD mental health resources. We need to look at a way to integrate them in response plans and determine how military resources will be integrated in a civilian environment. Joint Forces Command has the responsibility of civil support for integrating DoD resources. A new effort is the Joint Task Force Civil Support, which focuses on incorporating DoD assets into any event. At the same time, DoD only responds to requests for help. They are not standing by and do not have the resources readily available.

Social Issues

The panel explored various social issues related to WMD attacks, including the following:

Stigma, the fear and isolation of a group perceived to be contaminated, will be a predominant issue in dealing with invisible contaminants and it will hamper community recovery and affect evacuation and relocation efforts.

The panel observed that in a biological attack, a community is more likely to divide from those perceived to be infected. The U.S. culture is less 'community' oriented than Japan and more individualistic. The panel predicted that an event such as the Sarin Gas attack would have far worse repercussions in the U.S. because of our 'one for one' attitudes.

Strategies are necessary for rebuilding communities after a WMD attack, including dealing with long-term social issues, such as Post-Traumatic Distress Syndrome (PTDS). PTDS has been embraced in Japan and is considered a normal ailment among the population and medical community.

Training/Education

Training medical personnel on issues of mental health is an excellent idea but the reality is they don't have time. Doctors are in high demand by their patients and do not have a great deal of time to plan for unlikely events. The new administration and top officials will require education about WMD, including the availability of mental health professionals and how to reach them.

The law enforcement community requires specific training in the WMD area. Few mental health practitioners have training specific to chemical and biological agents. Exercises and drills are an

excellent form of training and preparation but certain factors do not show in exercises such as the effects of chaos and sleep deprivation.

Educating the public will be a daunting challenge. One problem is the vast amount of misinformation in the public domain. According to the panel, only about 10% is accurate. Many people think that if something is in writing it must be true. To educate everyone we have to look at all audience demographics and use all communication channels: radio, TV, print, Internet. A study revealed that over 80% of the Hispanic population receives their news from radio.

Lessons Learned

Effects of Social Stigma

Victims of WMD attacks have been stigmatized by their communities. Goiana residents, for example, were refused seats on planes and their cars were stoned.

Lack of Preparation

In Richmond, California, sulfuric acid was released, resulting in over 24 thousand out of 125 thousand residents seeking medical evaluation. The medical and public health community was not prepared, nor are they prepared even to train for disasters. In a disaster drill in Chicago, emergency rooms pulled out because they were full at the time and could not conduct training.

Effects are Long-Term

The victims' families of Pan Am Flight 103 are still impacted after twelve years. In the Sarin Gas Attack in Tokyo, Japan, 18% of the people who responded to a survey (1200 out of 5000) said they still experienced flashbacks.

Government Credibility

The government is not always viewed as a credible source. In a chemical spill in Crockett, California, the crowd threw eggs at the EPA representative and attacked the corporate speaker at a post disaster town meeting. On the other hand, in the 1995 Oklahoma City Bombing, the President of the United States

addressed the nation with a message against terrorism and named the lead agencies, instilling confidence that the government had things under control.

False, Misleading Information

The public routinely reads and believes false information. For example, there are claims on the Internet that people and animals died from the Three Mile Island incident and that cancer rates increased considerably. This information is false.

Unresolved Issues

Awareness of Psychosocial Issues

Are decision-makers aware of the psychosocial issues in a WMD attack and are they aware there are experts in their own agencies to assist with mitigation of WMD impacts? Agencies have been tasked to develop state and local emergency plans. If so, an issue to resolve is the criteria for serving on the team?

Coordination of Effort/Assignment of Responsibilities

Unresolved issues include the following:

- If all the recommendations and analysis are performed and plans and conclusions are drawn, will there be a governing force to take action, allocate resources, and implement the plans or delegate implementation?
- How are military medical personnel going to interface with civilian medical personnel?
- How will federal agencies contact the victims' families in a WMD attack when the numbers are staggering? Who will handle death notifications?
- The responsibilities for security personnel have not been identified. If mass casualties occur, what's the plan for controlling chaos at the hospitals?
- Are some of the agencies already creating training programs and not talking to each other? How do we coordinate efforts at the national, state, and local level?

Risk Communications

Risk communication is difficult, if impossible, to apply in a WMD situation, since the immense uncertainty of a WMD prevents a thorough risk analysis. Also missing is a credible communicator with WMD knowledge who can serve as the messenger in a WMD attack and prepare accurate, pre-crafted messages ready for dissemination.

Research Challenges

Scientists will be able to provide answers to WMD issues but these will take time, due to the need for careful analysis. Asking these questions before a disaster happens could help, if those questions can be identified.

How do medical personnel handle differential diagnosis? Symptoms of fatigue, headache, nausea, muscle and joint aches are visible in radiology exposure, battle fatigue, and flu. How does the medical professional know the difference?

The experts recommend looking at past disasters and gathering data through surveys and focus groups. If this is to occur, at what level and who will fund the research? More importantly, how will this information be used? Is there an audience waiting to hear the findings and to act with written policies and resource allocation?

Legal Ramifications

Finally, what are the legal ramifications related to WMD attacks? For example, each state has different laws pertaining to quarantine and evacuation. Other legal issues include standards for radiation levels, triage procedures, questions of eminent domain, and so on. How will the response to an WMD attack work when it affects several states and involves several different agencies? Who will be the overlying governing agency that addresses legal ramifications?

Panel Conclusions and Recommendations

Overall Preparation

Overall preparation for a WMD attack must include the following components:

- Research, which must occur before, during, and after an attack;

- Education and training, starting with general training, then customized training for each group; and
- Accurate information disseminated to the public.

Plan Specifically for Each WMD Agent

The panel recommends looking at the different WMD agents and the different social aspects of each agent to develop specific plans for each. To deal with the uncertainty of WMD attacks, the panel recommends:

- Establishing the parameters of the expected responses; and
- Developing case studies that apply to particular types of WMD.

Public Education and Awareness Campaigns

The panel recommended desensitizing the public on WMD agents and what to expect by developing awareness campaigns and community training as soon as possible. Surveys and focus groups can help identify the public's values and concerns.

To encourage responsible media involvement, agencies should set up a Joint Information Center at the disaster site, with the FBI serving as the media liaison, FEMA marshalling consequence management, and state and local representation.

Media representatives should meet face-to-face with public affairs officials, scientists, and politicians, before a WMD occurs.

RECOMMENDATIONS FOR FUTURE RESEARCH, ANALYSIS, AND OTHER ACTIVITIES

Introduction

Based on the panel discussions and additional analysis, the following items are recommendations for future research, analysis and other activities that could assist in the development of a WMD strategic consequence management plan for crisis/risk communications. There are two primary objectives underlying the following recommendations.

First, agencies need to ensure that effective response capabilities are in place as quickly as possible in the event of an actual WMD attack.

Second, agencies must ensure that through the effective application of risk communication principles, that the potential for a domestic WMD event moves from the realm of the "unthinkable" to the "terrible, but controllable" in the public's perception. Risk communication *before* a WMD event has several different goals:

- To increase public acceptance of preventive measures (or at least of discussion about preventive measures) now;
- To increase public responsiveness to precautionary advice in the event a WMD threat becomes more imminent; and
- To increase public compliance with emergency procedures and decrease the probability of panic after a WMD event.

All three of these goals depend on replacing denial with calm concern. Achieving these goals will require determining existing public perceptions of a domestic WMD event.

The recommendations are organized in two phases: Near-term and mid-to-long term recommendations. They are numbered to indicate a logical organization and for reference, but not to serve as a step-by-step "checklist."

Near-term Recommendations

The following are some near-term recommendations. Some type of gap analysis is recommended to distinguish what *can* be done near-term and what the agencies believe *must* be done to prepare for a WMD event that could happen at any time.

I. Conduct a Symposium on Legal Issues

A symposium on the legal issues that were raised in the workshop but not fully explored should be held in the near term. Many planning issues have potential legal ramifications; for example, each state has different laws pertaining to quarantine and evacuation. A symposium that brings together legal experts could help build a foundation for understanding the full legal ramifications of a WMD attack and the subsequent actions available to the government.

II. Begin Setting Up a Communications Network

A critical component of a crisis/risk communication strategy is to set up a communications network. This would comprise an alliance between the identified WMD communication response network and representatives from the major print, radio and television organizations and networks, and other identified media representatives. This network can later be relied upon to deliver messages and provide accurate coverage of WMD events and response plans.

Mass-media, however, are inherently one-way and impersonal, primarily designed for disseminating information, rather than interpersonal communication. The communications network should also incorporate interpersonal, "two-way" communication methods that especially impact those closer to the WMD attack.

The overall process of setting up an effective communications network would include the following components:

Analyze Factors That Instill Trust

Panelists agreed that a major roadblock to effective communications is lack of trust, especially distrust of government. Government is much more readily trusted when it warns than when it reassures. There is some risk that government warnings about WMD events may damage trust—but false reassurance is by far the greater risk here. Fear can be eased and panic avoided if accurate information is delivered by trusted spokespersons (local fire chief, mayor, politician). Analyzing the factors that instill trust and what causes the public to identify a source as trustworthy would be beneficial in developing a network of trusted communicators.

Especially important are factors that would improve the public's trust and confidence in government and government officials. The risk communication identifies a number of "trust

determinants" in threatening situations. Some are personal characteristics of a trusted source (caring and empathy); others are situation-dependent (competence and expertise) and may be less categorically applicable. How well "trust" translates into "credibility" will likely be determined by a combination of both.

A variety of methods can be used to conduct such an analysis, including formal and informal surveys, and focus groups.

Identify Credible "Validators"

Based on the above analysis, another task would be to identify independent "validators" and credible sources. Validators are subject matter experts trained in media communications who can answer questions when responders cannot. Effective validators are known to the media before a WMD event and their support is enlisted if and when a WMD attack occurs.

A ready network of validators provides the media with credible, validated sources during a crisis period; it will help to ensure (but cannot guarantee) that accurate information gets through to the public. Forging relationships with such individuals and enlisting their support for future efforts can begin in the near term.

The near-term is also the time to get media representatives in the same room with public affairs officials, scientists, and DoD officials to discuss how they will handle communications in the event of a WMD domestic attack.

Identify National and Local "Trusted Communicators"

Although validators should be "trusted" individuals, in the sense that they have the requisite credibility gleaned from subject matter expertise, they are distinct from "trusted communicators" -the 'Walter Cronkites' of the world-whom the public already knows and trusts. The panel noted that a credible expert can be believed yet not trusted. It will be important to identify trusted individuals and use them in communication response programs.

In addition to nationally-known and trusted individuals, it is important to identify local individuals who can also be trusted, such as chaplains, local fire chiefs, local newscasters, and politicians. The trust in these individuals will be situation-dependent, consisting of both personal trustworthy characteristics and situational competence and expertise. Exposing these individuals to the public before an event will

lay the foundation of trust needed in a crisis/risk communication response plan.

The most important WMD communications will occur before an event takes place. Trust can be "engineered" by providing communicators with information of an event's probability, methods of prevention, recommended behavior if an event happens and so on.

Investigate Realistic Scenarios

A prerequisite of the mid- and longer-term planning and preparation process, agencies can meet, as soon as possible, to identify any existing, realistic WMD agent scenarios. Working groups can determine what scenarios exist and to what extent is there any public awareness of such scenarios?

If possible in the near-term, agency personnel can plan to begin simulating WMD attacks, using realistic scenarios, and study the results.

III. Develop A Public Awareness and Education Campaign

In the near-term, it will be important to begin work on a coordinated public awareness and education campaign, which will be expanded and refined in the mid- and long-term. An effective campaign will include the following components.

Using the Internet

The Internet is a critically-important communications channel. It is, however, a double-edged sword. It offers the most effective and quickest form of information distribution known to mankind. At the same time, the Internet can just as easily communicate *misinformation*.

Agencies should use their websites to identify major elements of misinformation. A web strategy should be developed that aims to make user-friendly agency websites the sites of choice for the public. These sites can also directly address the misinformation that has been identified on the internet. The information on websites should be easy to print, so that the public can keep the information visible in case of power outages. Also advisable will be to establish a WMD web site to provide centralized information on WMD prior to, and during, an event.

The Internet, like the news media, is a mass, impersonal medium. Unlike traditional mass media, however, the Internet offers some

interactivity (email, chat rooms, online forums, and so on) and it can be used to target smaller, well-defined audiences.

It is important to note, that while the Internet is a key link for individuals and organizations who are very interested in WMD issues and a key source for journalists, it is useless for those members of the public who are in denial. Since the Internet, by definition, is user-controlled, people in denial will not seek out information about the very subject they're denying.

Mid- and Long-term Recommendations

I. Develop and Expand the Public Awareness and Education Campaign

The public's knowledge and awareness of WMD agents is minimal. The public's concern about the possibility of a WMD attack ranges from over-concern to apathy and denial. The panel suspects and studies imply that denial is dominant. Studies indicate, however, that the public's reaction to an WMD attack would overwhelm the medical and public health community and cause crisis and panic.

Therefore, the panels stressed the importance of educating the public through a coordinated public awareness and education campaign. The communications network developed during the near-term, as described above, can initiate the planning for such a campaign. An education and awareness campaign could work to inform the public on WMD agents and prepare them better for such an event. An effective awareness and education campaign would incorporate the following components.

Target Communication to Specific Audiences

Every communications campaign works best when messages are targeted to specific stakeholder groups, based on its specific concerns. The communication strategy will need to target several stakeholder groups, including the following:

- General public
- Top government officials
- Media
- Local communities
- Medical/health community
- Members of "preparedness/survivalist" groups

Work with the Entertainment Industry

One of the best ways to educate the public is to enlist the support of the entertainment industry. Agencies such as the CDC already have outreach programs in place to ensure that television and movies portray the CDC and the issue of biological agents accurately to the public.

All agencies should participate in similar outreach programs that provide accessible information to producers and writers to minimize the misinformation communicated to the public through entertainment vehicles. Hollywood can be used to dramatize the seriousness of WMD agents, to condition the public to believe in the severity of the threat.

II. Identify a Lead Agency

During the short-term, the likely strategy for responding to a WMD attack will be careful coordination among agencies, without a single agency tasked as the "lead" agency prior to the event. In the longer-term, however, a lead agency could be identified to orchestrate consequence management in a WMD attack.

Determine Roles and Responsibilities

An important step will be to determine the roles and responsibilities of the involved agencies. This, in turn, will depend upon developing realistic response scenarios for each type of WMD agent, including chemical, biological, radiological, nuclear, and explosive. Agency representatives can meet, in working groups, to identify various realistic WMD agent scenarios. The scenarios would:

- Address chemical, biological and nuclear/radiation events separately; and
- Review existing analyses and analyze past events to establish additional lessons learned.

The goal would be to develop a response plan that identifies the lead agencies involved in each scenario and their respective assignments in the areas of communications, operations, containment, and so on. This response plan would integrate federal agencies with state and local responders, and clearly define the roles of each organization in each scenario.

The response plan, as expanded by the planning and preparation activities described below, could then be presented to top

officials as a singular, cohesive, communication response plan to a WMD attack.

The panel recommended bringing together representatives from DoD, DOJ, FBI , FEMA, and HHS, to identify the potential lead agencies, develop a blueprint for response assignments, and present their conclusions at a later meeting with the heads of the respective agencies. Only through consensus will this first order of business be resolved. From this key decision, other decision-making and planning will flow.

III. Planning and Preparation

Preparation for a domestic WMD attack will require more detailed planning activities that include the following.

Analyze Crisis Behavior

The most important planning activity is to conduct further analysis about human behavior in crises to determine the public's concerns regarding WMD and their likely reaction to a domestic attack. Such analysis should include the following steps:

- Establish parameters of expected responses;
- Develop case studies applicable to specific WMD agents;
- Gain knowledge about public behavior through surveys and focus groups; and
- Simulate WMD attacks using realistic scenarios, and study the results.

Research must occur before, during, and after an attack. Much of the information needed to develop accurate communication plans may be available from analysis of past disasters, although some events, such as a bioterrorism attack are largely unprecedented.

Develop a Detailed Communications Strategy

A detailed communications strategy will include the following components.

Use of existing research to develop messages. Analysis of past disasters can help diagnose the gap between public perception and reality. The risk communication literature identifies about two dozen "risk perception factors." Every scenario should be reviewed within the context of these. It is important to

recognize that these factors apply in combinations and are cumulative in their impact on fear and panic.

The USS Cole is a useful case study on how a terrorist attack affects crew members and other sailors who have deployed since the attack. The most credible messages about WMD will be those that address the gaps between perception and reality. Pre-crafted messages, developed in part on past experience, can form the basis for an effective response plan.

Identification of WMD scenarios to target messages. To develop effective crisis/risk communication strategies, agencies will need to build upon the near-term identification of different scenarios for the various WMD agents and the potential social impacts of each. This will help communication planners anticipate questions from the public and ensure that the right information will be available when addressing the public. The communication plan should let the public know:

- The best and worse-case scenarios;
- Probable outcomes; and
- Efforts being undertaken to improve the situation.

There should be a balance between:

- Planning for communication during/after a WMD event; and
- Actual communication before any event about its probability and survivability; how to prevent it, if possible; and how to cope with the event if it occurs.

Identification of specific stakeholder group needs. An effective strategy identifies key stakeholder groups and recognizes the differing information needs of each group—politicians, elderly, medical community, and so on. A matrix can be useful in identifying the types of stakeholders and assigning responsibility to the appropriate agencies.

Implementation of two-way communication. The plan should include two-way communication tools to provide information and ease public fear and panic. Hotlines can be used to address the most immediate public concerns. In addition, the Joint Information Centers (JICs) should include media monitoring, rumor control, and rapid response as a part of the communication plan.

It is likely that the public has three fundamental concerns related to a domestic WMD event:

- Why should I even think about this unsettling, unlikely, and unsurvivable event?

- What are you doing or can you do to protect me from such an event; and
- What can/will you do to protect me if one does occur?

The initial message development should probably focus on addressing these underlying concerns.

Address Training Needs

Training will be a critical aspect of the preparation process for a WMD attack. A key goal will be to instill a risk communication culture throughout DoD, government medical agencies, and emergency responders at all levels. Training components include the following.

Review Existing Training Preparation will involve identifying training that has already taken place at the federal, state and local level, and the training necessary to sustain a large-scale consequence management plan. The lead agencies should meet with the various response teams and determine work that has already been accomplished.

Devise a Plan to Integrate Different Training Programs In addition, the training plan should aim at integrating existing training programs that could be relevant to a WMD attack. For example, a HAZMAT response plan might offer some useful insights into planning for a bio-terrorism response plan. The training for one could be applicable to the other.

Identify Trainers The plan will identify appropriate trainers for each aspect of the response plan and each type of WMD attack.

Address Training of Medical Personnel

Training will be an important factor for the medical community since they will likely be first responders and their existing training in WMD attacks is minimal. The panelists recommended focusing on the outpatient environment for training because that is where most patients get their information about medical conditions. Training of medical personnel should ready such personnel to deal with various types of public responses to a WMD attack, including the following:

- Multiple Unexplained Physical Symptoms (MUPS);
- The 'worried well'—people who perceive they are sick but really are not (perhaps the single most important source of panic);

- Differential Diagnosis: the similarity between WMD-related symptoms and those associated with common illnesses, such as cold and flu; and
- Scapegoat Syndrome—patients who take their anxieties and anger out on medical personnel, especially toward those who are nearby during the crisis response.

Planning should also include the possibility of evacuation by medical personnel. Panelists recommended putting a support system in place for medical personnel that ensures their families are cared for while they are working in a WMD disaster.

Enlist the Help of Mental Health Professionals

Mental health professionals are vital assets in developing an effective consequence management strategy. Mental health professionals should be involved in planning communication strategies and developing messages. The Joint Information Center (JIC) should include a mental health representative on the team and planners should consult with the mental health experts to address acute anxiety during and after disasters.

Investigate Sociological Impacts

Finally, dealing with the sociological impacts of a domestic WMD attack will require special attention. There are documented cases of long-term effects from disasters that have lasted 10-20 years after the event. Planners will need to look at the short and long-term effects of past disasters to understand what strategies can best mitigate these effects.

In the case of rescue workers for example, case studies show they are more likely to increase alcohol intake as a way of coping with the effects of a disaster. Yet they are the least likely stakeholder group to seek mental health assistance due to fear of retribution. Looking at a program that provides this group mental health without retribution should be an agenda item for planners to mitigate sociological effects.

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